

Zhaojin Chu

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EDUCATION

Carnegie Mellon University | Pittsburgh, PA

Expected May 2028

Bachelor of Science in Electrical & Computer Engineering

- GPA: 3.86/4.00

SKILLS

Programming: Python, C, JavaScript, SQL

Frameworks & Tools: Django, React, Node.js, PostgreSQL, Celery, ROS, Qt, PyTorch, ONNX, Git, Linux

EXPERIENCE

CMU Microdynamic Systems Laboratory | Undergraduate Researcher

Jul 2026 – Present

- Replaced the \$3,000 desktop controller of a 6-DOF maglev haptic device with a \$300 board inside it.
- Ported the firmware off a legacy QNX real-time machine and its PCI DAQ onto an STM32H7 (ARM Cortex-M).
- Brought up an AD7606 ADC and LTC2688 DAC over SPI with DMA against a 15 μ s sensor-to-actuator budget.
- Wrote a driver exposing the MLHI haptics API to SOFA and updated 8 device demos.
- Built a PyQt GUI over the ballbot's ROS nodes and a force-feedback teleoperation mode on the haptic device.
- Demoing the haptics and ballbot work at IROS 2026 and CMU Robotics & AI Discovery Day.

Logic Labs | Founder and Lead Developer

Jan 2024 – Feb 2026

- Built a Node.js/React storefront with Stripe checkout for an electronics program serving 60+ students.
- Designed the kits and curricula, and handed the codebase to a student team that still maintains it.

Pemo | Software Intern

Aug 2024

- Built a WhatsApp Business MVP that parsed requests, queried Retool APIs, and generated templated replies.

PROJECTS

MusBook | Founder and Full-Stack Developer

Sep 2023 – May 2025

- Built a Django lesson-scheduling platform used across Dubai College and by independent music teachers.
- Ran notifications on Celery workers and teacher-student chat over Django Channels WebSockets.
- Solo-built on PostgreSQL with role-based dashboards; handled $\sim$ 150 bookings a month.

RoboOrchestra | Project Lead, 40+ members

Nov 2025 – Present

- Built a conductor mode mapping hand gestures on camera to drum hits by screen region.
- Rewrote the instrument firmware on ESP32 Feathers and defined a platform-independent MIDI protocol.
- Added w.FL antennas to the ESP32 link for longer-range communication between instruments.

ReBin | TartanHacks Best Hardware, 1,000+ participants

Feb 2026

- Trained a YOLOv8n waste classifier and deployed it on a Raspberry Pi 5, built end to end in 24 hours.
- Shipped a facilities dashboard with utilization forecasts and heatmaps.

LEADERSHIP

RoboClub | Executive Board Officer

Mar 2026 – Present

- Oversee \$4,000+ in annual funding across 20+ robotics and engineering project teams.

PUBLICATIONS & AWARDS

Perception of Generative AI in the Gulf | Springer Nature

Oct 2025

- Analyzed 500+ survey responses with SEM; presented at Cambridge and published by Springer Nature.

Netcraft Computer Science Prize | Global Top 100

Sep 2025